Integrated Product Team (IPT) Process Training

Outline

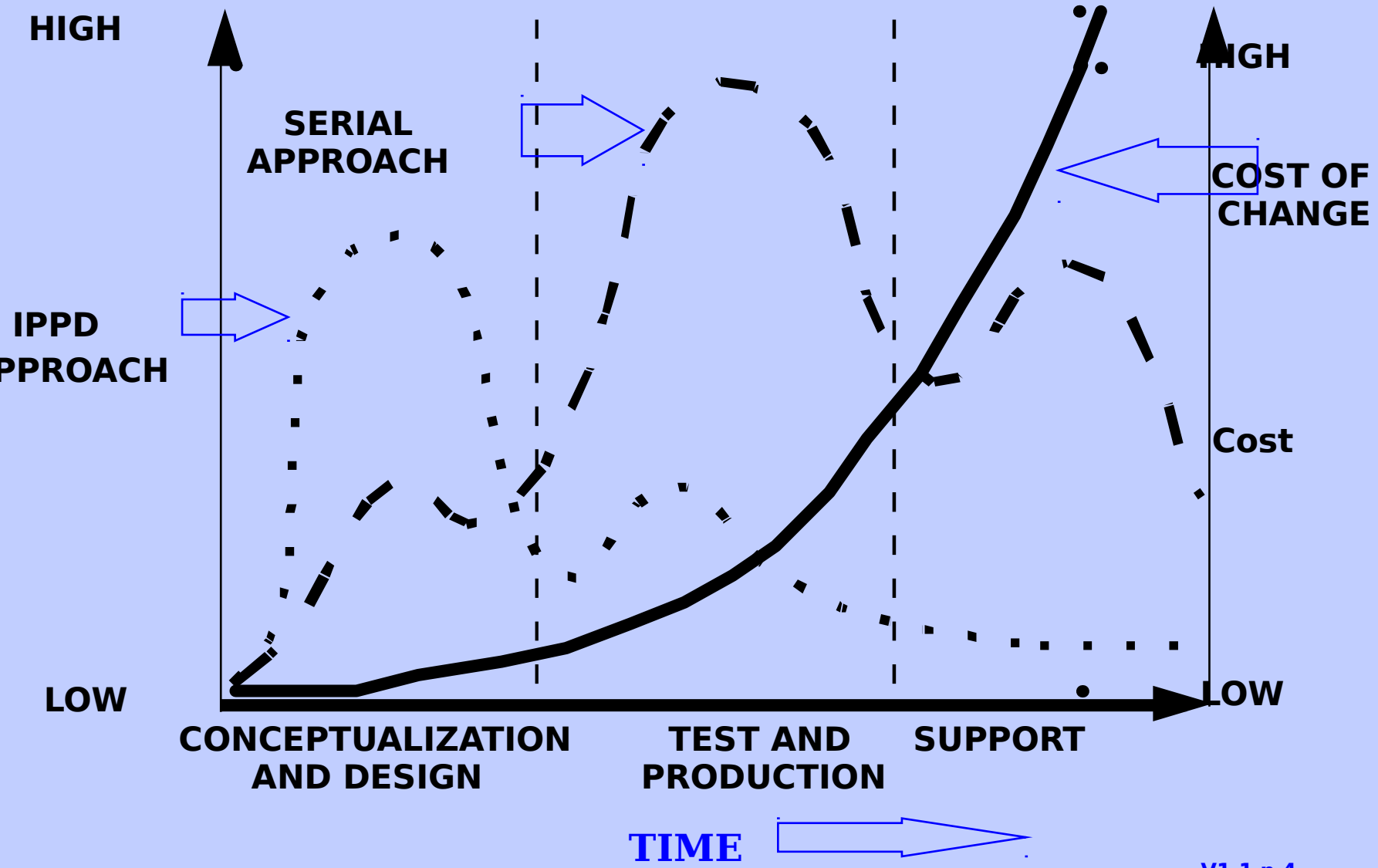
- What are IPT's
- Why IPT's
- Types of IPTs
- IPT Process
- Summary

What Are IPT's?

- **IPTs are cross-functional teams that are formed for the specific purpose of delivering a product for an internal or external customer**

- **IPT's implement the IPPD Process. DoD defines Integrated Product and Process Development (IPPD) as "A management process that integrates all activities from product concept through production/field support, using a multifunctional team, to simultaneously optimize the product and its manufacturing and sustainment processes to meet cost and performance objectives."**

IPPD VS Traditional Serial Approach



Background

- Not a new concept
- Related to integrated design and production practices, concurrent engineering, and total quality management (TQM), and the Intergroup Coordination KPA of the SW-CMM
- Part of ABC's of Acquisition Reform Initiative
- Requirement of DoDI 5000.2

"...I am directing a fundamental change in the way the Department acquires goods and services. The concepts of IPPD and IPTs shall be applied throughout the acquisition process to the maximum extent possible."

from SECDEF Memo of 10 May 1995

IPT Characteristics

- Must have vision or objective defined, including level of authority
- Team should be multidisciplinary
- Members must have both mutual and individual accountability
- Must have a decision-making process defined
- Team members empowered to make decisions
- Cost, schedule, and performance parameters pre-defined for the team

IPT Principles

- Open Discussions with no secrets
- Qualified, empowered team members
- Consistent, success-oriented, proactive participation
- Continuous “up-the-line” communications
- Reasoned disagreement
- Issues raised and resolved early

Why IPT's?

Features		Benefits
• Involvement of approving officials	→	• Faster approvals
• Replaces traditional sequential review process	→	• Provides continuous insight, not oversight • Shorter product development time
• Use of cross-functional skills	→	• Faster discovery of defects • Removal of stovepipe mentality • Better able to identify and mitigate risks • Increased communications

Why IPT's? (continued)

Features	Benefits
• Maximizes effectiveness of limited resources →	• Shorter development time • Reduced development costs
• Customer involvement throughout the life cycle →	• Reduced life cycle costs • Improved customer satisfaction

Types of IPT's

- **OIPTs (Overarching IPT)**
  - acquisition oversight

- **IIPTs (Integrating IPT)**
  - coordinates WIPT efforts and covers all topics not otherwise assigned to another IPT

- **WIPT (Working level IPT)**
  - focuses on a particular topic

- **Program IPTs**
  - provides for program execution

- **Each program will have an OIPT and at least one WIPT. An Integrating IPT will coordinate WIPT efforts.**

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IPT Process

Organization	Teams	Focus	Participant Responsibilities
OSD and Components	OIPT *	• Strategic Guidance • Tailoring • Program Assessment • Resolve Issues Elevated by WIPT's	• Program Success • Functional Area Leadership • Independent Assessment • Issue Resolution
	WIPTs *	• Planning for Program Success • Opportunities for Acquisition Reform (e.g. innovation, streamlining) • Identify/Resolve Program issues • Program Status	• Functional Knowledge & Experience • Empowered Contribution • Recommendations for Program Success • Communicate Status & Unresolved Issues
Program Teams & System Contractors	Program IPTs	• Program Execution • Identify & Implement Acquisition Reform	• Manage Complete Scope of Program, Resources & Risk • Integrate Government & Contractor Efforts for Program Success • Report Program Status & Issues

* See *Rules of the Road, A Guide for Leading Successful IPTs*

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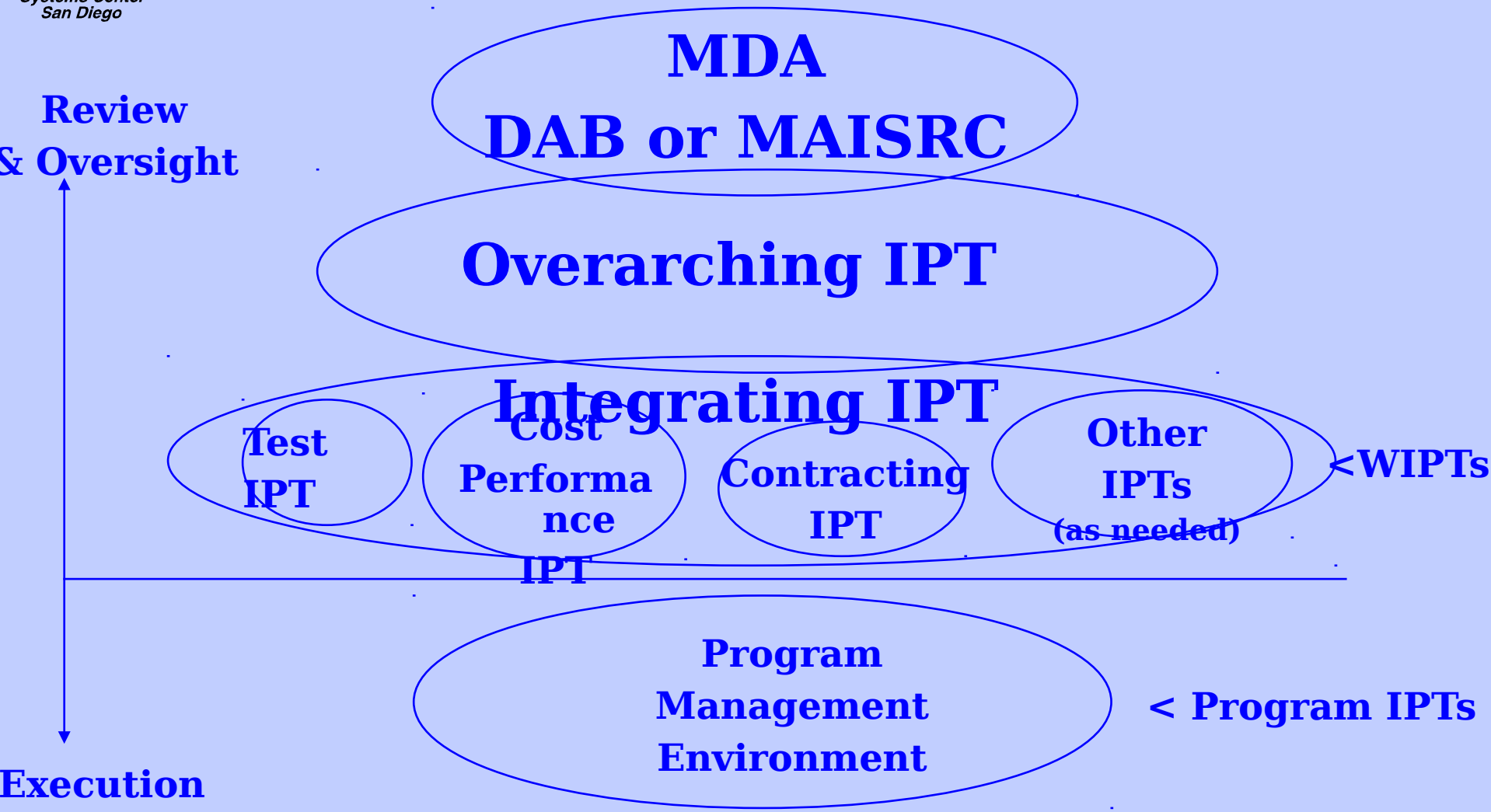
IPT Structure



DA (Milestone Decision Authority)
B (Defense Acquisition Board)
AISRC (Major Automated Information System Review Council)

OIPT's

- Applicable to ACAT ID and IAM programs
- Lead by an OSD official
- Composed of PM, PEO, Component staff, Joint staff, USD(A&T) staff, and OSD officials

- ACAT (Acquisition Category)
- IAM (M=MAISRC(Major Automated Information System Review Coun

OIPT Responsibilities

- Approve broad program strategy
- Provide assistance, oversight and review as the program proceeds through its acquisition life cycle
- Approve WIPT structure and resourcing
- Determine decision information for next milestone review
- Provide top-level strategic guidance
- Provide functional area leadership
- Provide a forum for issue resolution
- Provide an independent assessment to the MDA (Milestone Decision Authority)

PM Responsibilities for WIPT's

- The PM is in charge of the program
- IPT's are advisory bodies to the PM
- Direct communication between the program office and all levels in the acquisition oversight and review process is expected as a means of exchanging information and building trust

Roles and Responsibilities of WIPT's

* Leader of each WIPT will usually be the PM or the PM's representative

- Assist the PM in developing strategies and in program planning, as requested by the PM
- Establish IPT Plan of action and milestones
- Propose tailored document and milestone requirements
- Review and provide early input to documents
- Coordinate WIPT activities with the OIPT members
- Resolve and elevate issues in a timely manner
- Assume responsibility to obtain principals' concurrence on issues, as well as with applicable documents or portions of documents

WIPT Examples

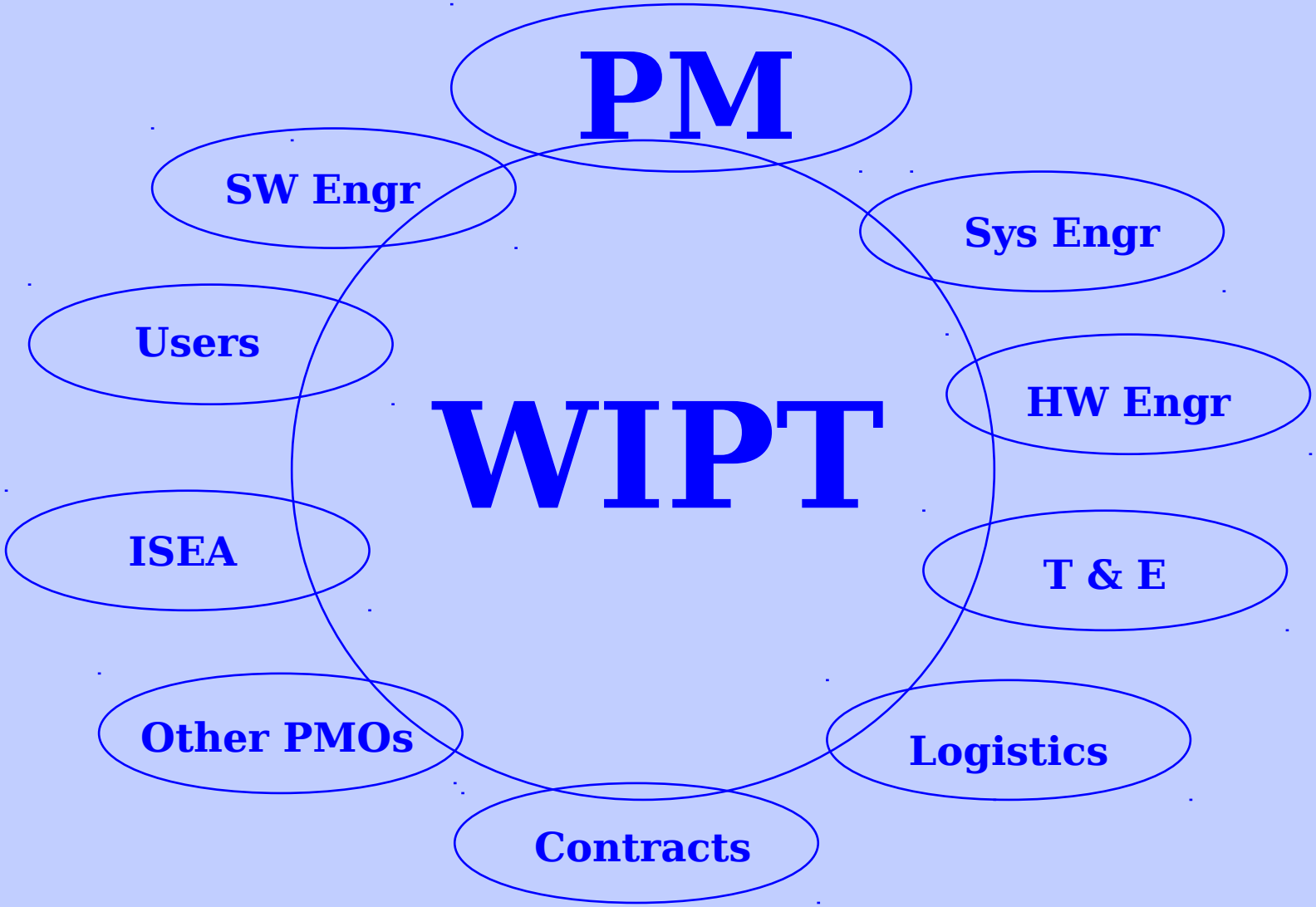
- **Test Strategy WIPT**

  - Goal of the WIPT is to assist in outlining the Test and Evaluation Master Plan (TEMP) for a major program

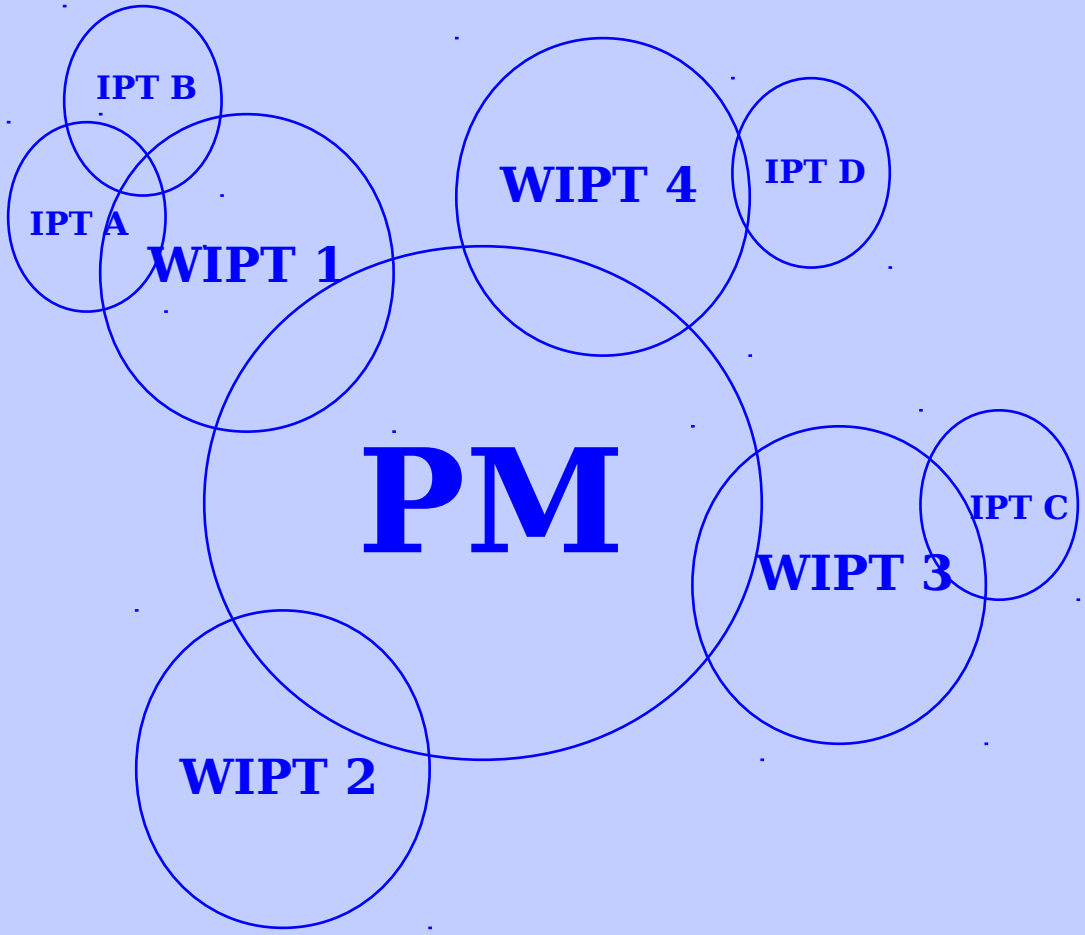
- **Cost Performance WIPT**

  - Purpose of the CPIPT is to facilitate cost-performance trades and to assist in establishing program cost-range objectives

WIPT Structure, Single WIPT



Multiple WIPTs



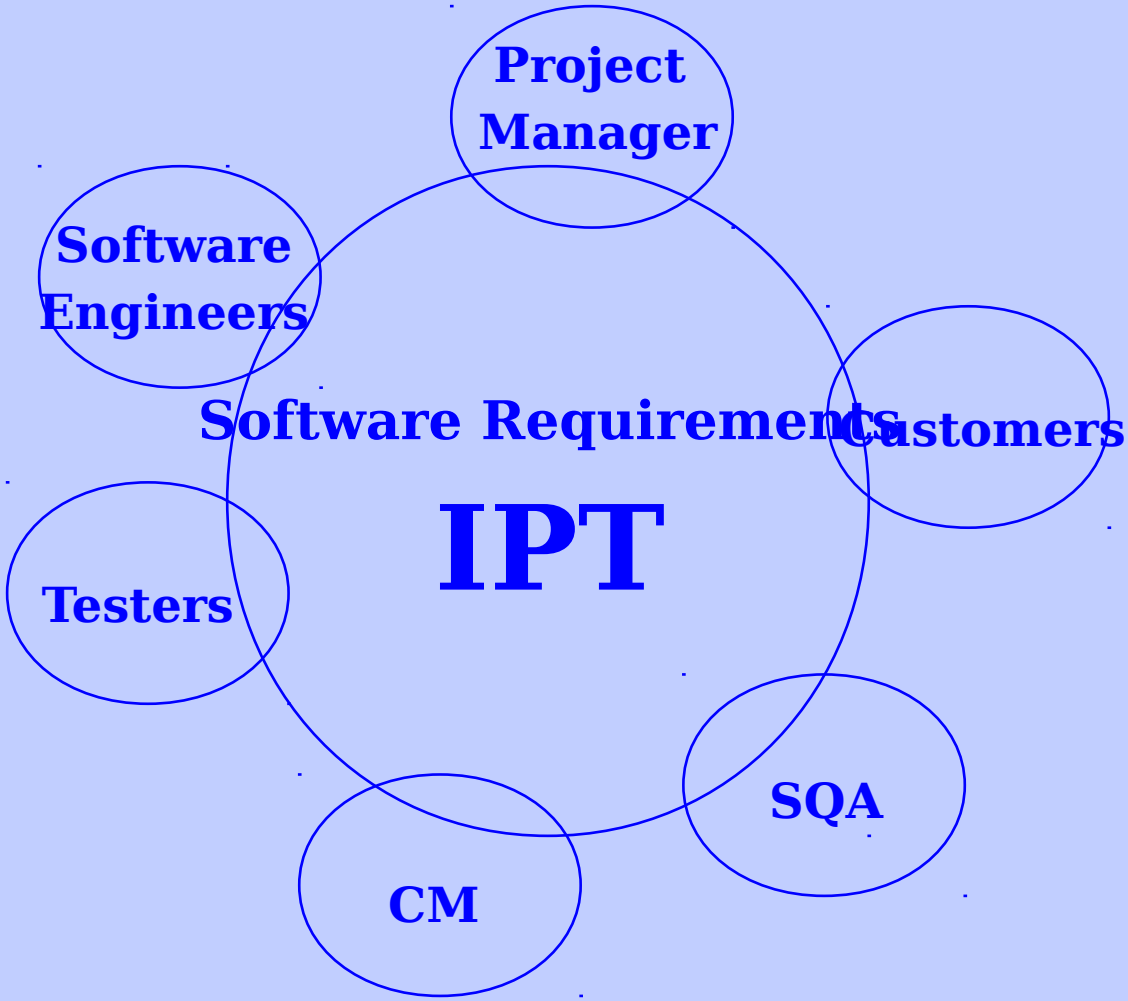
- **Lower level IPT leaders are higher level IPT members**

Program IPT's

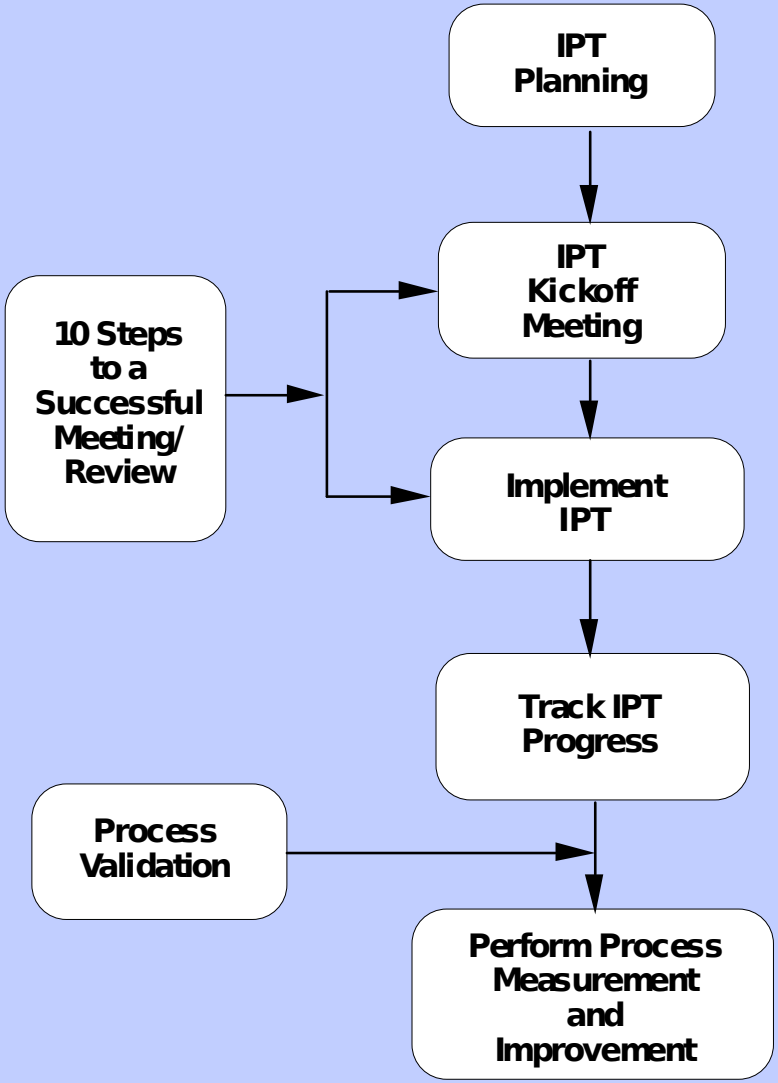
- Focus is on program level issues

- Examples:
  - Software Process Improvement IPT
  - Software Design IPT
  - Hardware/Software Integration IPT

Example of a Software Requirements Program IPT



IPT Process


IPT Planning
IPT Kickoff Meeting
10 Steps to a Successful Meeting/ Review
Implement IPT
Track IPT Progress
Process Validation
Perform Process Measurement and Improvement

IPT Planning (Step 1)

- IPTs normally formed at program initiation (Many IPT's are a requirement of DoDI 5000.2)
- Sponsor or Program requirement?
- Set goals and scope of IPT
- Does similar function already exist?
- Identify products and customers of IPT

OSD determines need for and conducts OIPT
PM determines need for and conducts WIPTs
Project manager determines need for and conducts Program IPTs

IPT Planning (Step 1) (continued)

- **Determine IPT participants and resources required**
- **Determine team member empowerments and level of authority required**
- **Determine top level support required for IPT**
- **Define cost, schedule, and performance constraints**
- **Appoint team leader***

May be OSD official, PM, or project manager or their representative depending on the type of IPT

IPT Kickoff Meeting (IPT Leader) (Step 2) (more than one mtg may be required)

- Develop meeting ground rules
- Determine and assign team roles (facilitator, recorder, etc.)
- Ensure teams members have been trained for their roles
- Perform Team Building
- Review the 10 steps to a successful meeting/review
- Review IPT process
- Review IPT goals, products, and constraints
- Define and determine process metrics to be collected

IPT Kickoff Meeting (*IPT Leader) (Step 2) (continued)

- Develop IPT charter
- Develop IPT plan
- Determine decision-making process
- Determine conflict resolution process
- Determine team communication mechanisms (e-mail, VTC, groupware, etc.)
- Determine meeting frequency
- Discuss meeting facility requirements
- PM should provide a program overview briefing for a WIPT

Implement IPT (IPT Leader) (Step 3)

- Follow agreed upon IPT process
- Follow the 10 steps to having a successful meeting by having a agenda, being prepared, recording meeting minutes, and assigning and tracking action items
- IPT continues until IPT goals have been met, usually product delivery or program approval

Track IPT Progress (IPT Leader) (Step 4)

- Compare IPT plan vs. actuals
- Update Plans
- Implement corrective actions

Process Validation (IPT Leader) (Step 5)

- QA reviews for process compliance and product quality
- Senior management and the project manager periodically reviews the activities of the IPT

Process Measurement and Improvement (IPT Leader) (Step 6)

- Collect metrics from each process step
- Analyze metrics
- Implement process improvements
- Record lessons learned

Summary

- IPTs are not a new concept
- IPTs reduce product development time, costs, risks, and increases product quality and customer satisfaction
- Six IPT principles
- Types of IPTs (OIPT, WIPT, Program IPT)
- IPT process
- For further information on IPTs visit “http://www.acq.osd.mil/ar/ipt.htm”

References

- DoD Guide to Integrated Product and Process Development (Version 1.0) 5 February 1996 Office of the Secretary of Defense (Acquisition and Technology)
- SPAWAR Integrated Product Teams Brief, 1995
- Rules of the Road - A Guide for Leading Successful Integrated Product Teams, Under Secretary of Defense for Acquisition and Technology, November 1995
- OIPT-WIPT Information Guide, Office of the Undersecretary of Defense for Acquisition Reform, March 1996